In the Claims:

1. (Currently Amended) A method for use in fabricating a chip, the method comprising the steps of:

determining a density and location of at least one functional area of a layer; and

adding dummy structures to said layer as a function of the determined density and determined location, wherein the adding comprises the substeps of

determining a placement of one dummy structure as a function of the width and density of functional areas within a predetermined distance of a location; and

determining a size of said one dummy structure as a function of the determined placement.

2. Cancelled.

3. (Currently Amended) The method of claim [[2]] 1 further comprising determining a shape of said one dummy structure as a function of the determined size.

4. (Original) A method for use in fabricating a chip, the method comprising the steps of:

determining a density and location of functional areas of a layer in relation to a location being processed; and

adding dummy structures to said layer as a function of the determined density and determined location, said dummy structures each having placement determined as a function of the width and density of the functional areas, size determined as a function of the determined placement, and shape determined as a function of the determined size.

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5. (New) The method of claim 4, wherein the size of the dummy structures are heterogenous across the chip.

6. (New) The method of claim 4, wherein the density of the dummy structures are heterogenous across the chip.

7. (New) The method of claim 4, wherein the density and location is determined relative to a first distance from the location.

8. (New) The method of claim 4, wherein a first distance is based upon the distance between functional areas.

9. (New) The method of claim 4, wherein functional areas are raised areas of a layer.

10. (New) The method of claim 1, wherein the placement of the dummy structures are determined at least in part in accordance with the equation:

$$C_x = \alpha \sum_{i=1}^{i=n} \frac{1}{(a_i d_i)} + \beta \left(\frac{n}{d_n} \right),$$

wherein

n is a count of nearest neighbor functional areas in a vertical direction to the location being processed;

d_n is a distance over which the n nearest neighbor functional areas are distributed;

a_i is a size of each functional area in the vertical direction;

d_i is a distance between the ith functional area and the location being processed; and

α and β are constants.

11. (New) The method of claim 10, wherein d_n is based upon the distance between functional areas.

12. (New) The method of claim 11, wherein d_n is a relatively large value when the distance between functional areas is relatively large and is a relatively small value when the distance between functional areas is relatively small.

13. (New) The method of claim 1, wherein the density and location is determined relative to a first distance from the location.

14. (New) The method of claim 1, wherein functional areas are raised areas of a layer.

15. (New) A method for placing dummy structures on a chip, the method comprising the steps of:

determining a numerical density of functional areas within a first distance;

determining a weighted sum of a pattern density within the first distance;

determining a placement of a dummy structure based at least in part on the weighted sum and the numerical density; and

determining a size of the dummy structure based at least in part on the placement.

16. (New) The method of claim 15, wherein the numerical density is determined at least in part in accordance with the equation:

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$$\left(\frac{n}{d_n}\right),$$

wherein

n is a count of nearest neighbor functional areas in a vertical direction to the location being processed; and

d_n is a distance over which the n nearest neighbor functional areas are distributed.

17. (New) The method of claim 16, wherein d_n is based upon the distance between functional areas.

18. (New) The method of claim 16, wherein d_n is a relatively large value when the distance between functional areas is relatively large and is a relatively small value when the distance between functional areas is relatively small.

19. (New) The method of claim 15, wherein the weighted sum is determined at least in part in accordance with the equation:

$$\sum_{i=1}^{i=n} \frac{1}{(a_i d_i)},$$

wherein

n is a count of nearest neighbor functional areas in a vertical direction to the location being processed;

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a_i is a size of each functional area in the vertical direction; and

d_i is a distance between the ith functional area and the location being processed.

20. (New) The method of claim 15, wherein functional areas are raised areas of a layer.

21. (New) The method of claim 15, further comprising determining a shape of the dummy structure as a function of the size.

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